Docket 83094RRS
Customer No. 01333

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

James W. Cannon, et al

DISPLAY DEVICE AND METHOD FOR DETERMINING AN AREA OF IMPORTANCE IN AN ORIGINAL IMAGE

Serial No. 10/810,283

Filed 26 March 2004

Group Art Unit: 2628

Examiner: Michelle K. Lay

Mail Stop APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA. 22313-1450

Sir:

APPEAL BRIEF PURSUANT TO 37 C.F.R. 41.37 and 35 U.S.C. 134

Table Of Contents

APPELLANT'S BRIEF ON APPEAL

Appellants hereby appeal to the Board of Patent Appeals and Interferences from the Examiner's Final Rejection of claims 1-46 which was contained in the Office Action mailed April 20, 2007

A Notice of Appeal was filed October 19, 2007 with a 3 month extension.

Real Party In Interest

As indicated above in the caption of the Brief, Eastman Kodak Company is the real party in interest.

Related Appeals And Interferences

No appeals or interferences are known which will directly affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

Status Of The Claims

"List ALL claims that were ever in the case" (Claims 1-46)

Appendix I provides a clean, double spaced copy of the claims on appeal.

Status Of Amendments

The claims have been amended and stand amended as filed by way of amendment filed herewith that cancel claims 19 and 20 for the clarification of matters on this appeal.

Summary of Claimed Subject Matter

In one embodiment (Claim 1) the invention takes the form of a display device (Ref: 10, Fig. 1, which is discussed at least at Pg. 9, Lns. 30-32). The display device comprises a source of an original image (Refs: 22, 40, 54, Fig. 1 which are discussed, at least at Pg. 9, Lns. 30 -32, Pgs. 10 -13 all lines, Pg. 16, Lns. 5-14, Pg. 16, Lns. 15 – 32, Pg. 17, Lns. 1-3); a display (Ref: 30, Figs. 1, 2, 3, which is discussed at least at Pg. 10, Lns. 1 – 3, Pg. 16, Lns. 26-32, Pg. 17, Lns. 1 - 8); a user input system (Ref: 34, Figs. 1, 2, 10, 12, which is discussed at least at Pg. 13, Lns. 24 – 27, Pg. 25, lines 28 – 32, Pg. 26, Lns. 1 -32, Pg. 26, Lns. 1 -32, Pg. 28, Lns. 1 – 21) adapted to generate a non-directional signal in response to a user input action; and a controller (Ref: 32, Fig. 1, which is discussed at least at Pg. 10, Lns. 11 – 14) adapted to determine a set of portions (Refs: 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148 and 150, 260, 262, 264,

266, 268, 270, 272, 274, 276, discussed at least at Pg. 20, Lns. 21 – 32, Pg. 21, Lns. 3 – 32, and Pg. 22, Lns. 1 – 15, Pg. 31, Lns. 23 -32, Pg. 32, Lns. 1 – 32, and Pg. 33, Lns. 1-3) of the original image each portion including less than all of the original image and with the set having at least one portion that is non-central with respect to the original image and to successively designate a different one of a set of portions of the original image in response to each non-directional signal and adapted to cause the display to present a portion evaluation image (Refs: 160, 162, 302, Figs. 6, 7, discussed at least at Pg. 22, Lns. 23 – 32, Pg. 23, Lns. 1-23, Pg. 31, Lns. 18 – 32, Pg. 32, Lns. 1 – 32, Pg. 33, Lns. 1 -3) showing the currently designated portion of the original image and to determine an area of importance (Ref: 164, Figs. 3, 7 and 11, discussed at least at Pg. 24, lns. 4-25, Pg. 25, Lns. 1 – 27, Pg. 26, Lns.3- 32, Pg. 27, Lns. 28) in the original image based upon the currently designated portion. Each portion evaluation image shows the currently designated portion having a magnification, that is greater than the magnification that the currently designated portion has when the currently designated portion is presented as a part of the original image.

In another embodiment, (claim 14) a display device is provided. The display device (Ref: 10, Fig. 1, which is discussed at least at Pg. 9, Lns. 30-32), has a source of an original image; (Refs: 22, 40, 54, Fig. 1 which are discussed, at least at Pg. 9, Lns. 30 -32, Pgs. 10 -13 all lines, Pg. 16, Lns. 5-14, Pg. 16, Lns. 15 – 32, Pg. 17, Lns. 1-3), a display (Ref: 30, Figs. 1, 2, 3, which is discussed at least at Pg. 10, Lns. 1 – 3, Pg. 16, Lns. 26-32, Pg. 17, Lns. 1 – 8); a user input system adapted to generate an advance signal that indicates only that a user input action has been taken and a save signal (Ref: 34, Figs. 1, 12, 13, discussed at least at (Ref: 34, Figs. 1, 2, 10, 12, which is discussed at least at Pg. 13, Lns. 24 – 27, Pg. 25, lines 28 – 32, Pg. 26, Lns. 1 -32, Pg. 27, Lns. 1 -32, Pg. 28, Lns. 1 – 21, Pg. 29 , Lns. 1 – 32, Pg. 30, Lns. 1 – 32, Pg. 31, Lns. 1- 32, Pg. 32, Lns 1 – 32, Pg. 33, Lns. 1 -3); and a controller (Ref: 32, Fig. 1, which is discussed at least at Pg. 10, Lns. 11 – 14) adapted to detect the advance signal and, in response thereto, to cause the display to present a sequence of portion evaluation images (Refs: 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148 and 150, 260, 262, 264, 266, 268, 270, 272, 274, 276, discussed at least at Pg. 20, Lns. 21 – 32,

Pg. 21, Lns. 3 – 32, and Pg. 22, Lns. 1 – 15, Pg. 31, Lns. 23 -32, Pg. 32, Lns. 1 – 32, and Pg. 33, Lns. 1-3) each representing the image content of one of a set of different portions of the original image and showing each portion having a magnification that is greater than the magnification that each portion has when the portion is presented on the display part of the original image with the predetermined set of portions including at least one portion that is non-central with respect to the original image. The controller determines an area of importance in the original image based upon the portion of the original image presented when the controller detects the save signal.

In yet another embodiment (claim 21) a display device is provided. The display device (Ref: 10, Fig. 1, which is discussed at least at Pg. 9, Lns. 30-32), has a source of an original image (Refs: 22, 40, 54, Fig. 1 which are discussed, at least at Pg. 9, Lns. 30 -32, Pgs. 10 -13 all lines, Pg. 16, Lns. 5-14, Pg. 16, Lns. 15 – 32, Pg. 17, Lns. 1-3), a display (Ref: 30, Figs. 1, 2, 3, which is discussed at least at Pg. 10, Lns. 1 – 3, Pg. 16, Lns. 26-32, Pg. 17, Lns. 1 – 8), a user input system (Ref: 34, Figs. 1, 2, 10, 12, which is discussed at least at Pg. 13, Lns. 24 – 27, Pg. 25, lines 28 – 32, Pg. 26, Lns. 1 -32, Pg. 26, Lns. 1 -32, Pg. 28, Lns. 1 – 21) adapted to generate a non-directional advance signal in response to a user input action; and, a controller (Ref: 32, Fig. 1, which is discussed at least at Pg. 10, Lns. 11 – 14) adapted to define a number of portion evaluation images (Refs:, 260, 262, 264, 266, 268, 270, 272, 274, 276, discussed at least at Pg. 20, Lns. 21 – 32, Pg. 21, Lns. 3 – 32, and Pg. 22, Lns. 1 – 15, Pg. 31, Lns. 23 -32, Pg. 32, Lns. 1 – 32, and Pg. 33, Lns. 1-3) each comprising image information from a portion of the original image with each portion being located relative to a predefined anchor point within the original image, with the controller further being adapted to cause a different portion evaluation image to be presented on the display in response to each advance signal and with the controller additionally being adapted to determine from the non-directional advance signal, a user designation of a portion of the original image and to use the designation to determine an area of the importance in the original image. At least one anchor point is located so that at least one portion is non-central with respect to the original image and wherein each portion evaluation image shows the currently designated portion having a

magnification, that is greater than the magnification that the currently designated portion has when the currently designated portion is presented as a part of the original image.

In still another embodiment a method for operating a display device is provided. The method comprises the steps of : obtaining an original image (Ref: 100, 180, 220, Figs. 3, 11 and 13, discussed at least at at Pg. 9, Lns. 30 -32, Pgs. 10 -13 all lines, Pg. 16, Lns. 5-14, Pg. 16, Lns. 15 – 32, Pg. 17, Lns. 1-3, Pg. 16, . Lns. 1 -14, and Pg. 28, Lns. 3 – 4); presenting an evaluation image having an appearance that corresponds to the original image (Ref: 102, 182, 222, Figs. 3, 11, and 13, discussed at least at Pg. 20, Lns. 1 – 10, Pg. 26, Lns. 1- 14, Pg. 28, Lns. 2 – 4) defining a set of different portions in the original image, with each portion comprising less than all of the original image and at least one of the portions being non-central with the original image (Refs; 106, 108, 186, 188, 224; 234, Figs. 3, 11, and 14, discussed at least at pg. 20, Lns. 11- 32, pg. 26, Lns 3 – 16, Pg. 28, Lns. 5- 32, Pg. 29, Lns. 1 – 30); detecting a non-directional user input action during presentation of the evaluation image (Refs; 106, 108, 186, 188, 224; 234, Figs. 3, 11, and 13, discussed at least at pg. 20, Lns. 11- 32, pg. 26, Lns 3 – 16, Pg. 28, Lns. 5- 32, Pg. 29, Lns. 1 – 30); designating one of the sets of portions in response to each detected non-directional user input action (Refs: 104, 106, 110, 186, 188, 190, 196, 198, 200, 202, 204, 206, 224, 234, 236, 238, 240, 242, 244, 246, Figs. 3, 11, and 13, discussed at least at Pg.. 20, Lns. 11- 32, Pg. 21, Lns. 1- 32, Pg. 23, Lns. 1 – 32, Pg. pg. 26, Lns 3 – 32, Pg. 27, Lns. 1- 28, Pg. 28, Lns. 5- 32, Pg. 29, Lns. 1 – 32, Pg. 30, Lns. 1 – 28);

Presenting a portion evaluation image that corresponds to the designated portion with the portion evaluation image showing the currently designated portion having a magnification that is greater than the magnification that the designated portion has when the currently designated portion is presented as a part of the original image (Refs: 108, 188, and 240, Figs. 3, 11, 13, discussed at least at Pg.. 20, Lns. 11- 32, Pg. 21, Lns. 1- 32, Pg. 23, Lns. 1 – 32, Pg. pg. 26, Lns 3 – 32, Pg. 27, Lns. 1- 28, Pg. 28, Lns. 5- 32, Pg. 29, Lns. 1 – 32, Pg. 30, Lns. 1 – 28); and determining an area of importance based upon the designated portion

(Refs: 112, 206, 234, 248; discussed at least at pg. 24, Lns. 4 – 17, Pg. 27, Lns. 7 – 16 and Pg. 29, Lns. 3 – 9 and Pg. 30, Lns. 2 – 16).

In a further embodiment, (claim 44) a method for operating a display device is provided. The method comprises the steps of obtaining an original image (Ref: 100, 180, 220, Figs. 3, 11 and 13, discussed at least at at Pg. 9, Lns. 30 -32, Pgs. 10 -13 all lines, Pg. 16, Lns. 5-14, Pg. 16, Lns. 15 – 32, Pg. 17, Lns. 1-3, Pg. 16, . Lns. 1 -14, and Pg. 28, Lns. 3 – 4); displaying an evaluation image of the original image (Ref: 102, 182, 222, Figs. 3, 11, and 13, discussed at least at Pg. 20, Lns. 1 – 10, Pg. 26, Lns. 1- 14, Pg. 28, Lns. 2 – 4, detecting an advance user input action that does not include a directional input relative to the displayed evaluation image (Refs; 106, 108, 186, 188, 224; 234, Figs. 3, 11, and 13, discussed at least at pg. 20, Lns. 11- 32, pg. 26, Lns 3 – 16, Pg. 28, Lns. 5- 32, Pg. 29, Lns. 1 – 30); selecting a sequence of different portions from a set of different portions of the original image in response to the advance user input action (Refs: 104, 106, 110, 186, 188, 190, 196, 198, 200, 202, 204, 206, 224, 234, 236, 238, 240, 242, 244, 246, Figs. 3, 11, and 13, discussed at least at Pg.. 20, Lns. 11- 32, Pg. 21, Lns. 1- 32, Pg. 23, Lns. 1 – 32, Pg. pg. 26, Lns. 3 – 32, Pg. 27, Lns. 1- 28, Pg. 28, Lns. 5- 32, Pg. 29, Lns. 1 – 32, Pg. 30, Lns. 1 – 28), presenting, for each selected portion, a portion evaluation image that indicates the image information in the original image that is contained within the currently designated portion(Refs: 108, 188, and 240, Figs. 3, 11, 13, discussed at least at Pg.. 20, Lns. 11- 32, Pg. 21, Lns. 1- 32, Pg. 23, Lns. 1 – 32, Pg. pg. 26, Lns 3 – 32, Pg. 27, Lns. 1- 28, Pg. 28, Lns. 5- 32, Pg. 29, Lns. 1 – 32, Pg. 30, Lns. 1 – 28); and detecting a save user input action (Ref: 244, Figs. 11 and, 13, discussed at least at Pg. 25, lines 28 – 32, Pg. 26, Lns. 1 -32, Pg. 27, Lns. 1 -32, Pg. 28, Lns. 1 – 21, Pg. 29 , Lns. 1 – 32, Pg. 30, Lns. 1 – 32, Pg. 31, Lns. 1- 32, Pg. 32, Lns 1 – 32, Pg. 33, Lns. 1 – 3) and determining an area of importance based upon the selected portion displayed when the save input user action is detected (Refs:206, 234, 248; discussed at least at pg. 24, Lns. 4 – 17, Pg. 27, Lns. 7 – 16 and Pg. 29, Lns. 3 – 9 and Pg. 30, Lns. 2 – 16). At least one of the predetermined set of portions of the original image is non-central with respect to the original image and wherein each portion evaluation image shows the currently designated portion

having a magnification, that is greater than the magnification that the currently designated portion has when the currently designated portion is presented as a part of the original image.

Grounds of Rejection to be Reviewed on Appeal

The following issues are presented for review by the Board of Patent Appeals and Interferences:

1. Whether *claims 1, 21, and 34 Are Allowable In View of 35 U.S.C. 112, First Paragraph.*

2. Whether *claims 1, 21, and 34 Are Allowable In View of 35 U.S.C. 112, Second Paragraph.*

3. Wether claims 1-13 and 21-43 Are Allowable under 35 U.S.C. 112, second paragraph.

4. Whether *claims 1-4, 7-18, 34-36 and 44-46 Are Allowable under 35 U.S.C. 103 in view of Moghadam et al. and Anderson.*

5. Whether claims 21-25, 28-30, 33 and 39 are allowable under 35 U.S.C. 103 in view of Moghadam et al. and Anderson and, further in view of Berkner et al.

6. Whether the remaining claims Are Allowable over various combinations that rely upon the combination of Moghadam et al and Anderson.

Arguments

I. Introduction.

The claims stand rejected under a combination of grounds including grounds for rejection under 35 U.S.C. 112, first paragraph, 35 U.S.C. 112, second paragraph, and 35 U.S.C. 103. These rejections are intertwined in large part

because the Office uses the rejections under 35 U.S.C. 112 to justify introducing a construction of one of the claim limitations that is inconsistent with the plain language of the claim Specifically, various claims have been examined as if the claimed phrase "non-directional signal" means "a signal of a predetermined direction". As will be discussed at length below, this is justified on grounds that the signal cannot be non-directional as claimed because it is possible that the system might respond to the non-directional signal in a manner that appears to suggest that the signal had some directional component. That is, the Office actually reads a directional component into a limitation that is claimed to be "non-directional". This construction permeates all aspects of the claim interpretation by the Office. This construction also presents a rather straightforward question to the Board: whether an Examiner can reject a claim that explicitly claims the generation of a signal that is non-directional on grounds that an unclaimed response of a processor to this non-directional signal might appear to be directional. The applicants do not believe that such a construction is allowable. The applicants also submit additional grounds for reversing the Final Rejection of these claims.

Turning now to an example of one of the claims at issue, the Applicants respectfully submit that claim 1 explicitly claims a user input that generates a non-directional signal. When a controller receives the non-directional signal, the controller is adapted to determine a set of portions of the original image each portion including less than all of the original image and with the set having at least one portion that is non-central with respect to the original image. The controller is further adapted to successively designate a different one of a set of portions of the original image in response to each non-directional signal and adapted to cause the display to present a portion evaluation image showing the currently designated portion of the original image and to determine an area of importance in the original image based upon the currently designated portion.

In this way, a user can be able to see a plurality of different portions of an image for magnified viewing without having to specifically designate such portions by use of a directional input. The user simply repeatedly causes the user input to generate a non-directional signal and the processor selects different

portions. It will be appreciated that this can be particularly useful for users who cannot take the time or who do not have an opportunity make such directional inputs. This is also particularly useful to provide the desired ability to view magnified portions of an image without adding the expense of a user input that generates a signal that has a directional component.

II. Claims 1, 21, and 34 are allowable under 35 U.S.C. 112, First Paragraph in that the limitation "non-directional signal" is sufficiently definite to enable one of skill in the art to make and use the invention.

Claims 1, 21 and 34 stand rejected under 35 U.S.C. 112, First Paragraph. As noted above, this rejection is used to introduce a logical error that then pervades the remaining arguments under 35 U.S.C. 103. Specifically, it is in these sections that the Final Rejection attempts to justify interpreting an element of the claims in a manner that is inconsistent with the plain language of the claim. In particular, it will be noted that claims 1, 21, and 34 recite the use of a "non-directional signal" to select a portion of the original image. As is claimed a user input generates a "non-directional signal" in response to a user input action. A controller determines what response a system will have to the signal. Throughout the Final Rejection, the Office Action attempts to graft the response of the system to the non-directional signal onto the signal itself. The Final Rejection justifies this by asserting that it is "unclear" as to how the signal can be non-directional if in some embodiment the response of the controller of the system to the signal might appear to suggest that the signal induces a directional response from the system.

In essence, the Final Rejection argues that the because in some embodiment it might look like the system is reacting to a directional input signal then the signal itself cannot be "non-directional" as is claimed. No legal support for such a position is provided.

Because the Final Rejection concludes that the term "non-directional signal" was unclear, the Final Rejection then proceeds to examine all claims based by interpreting the phrase "non-directional signal" as being one of a "predetermined direction". However, this interpretation is inconsistent with what is claimed. A "predetermined direction" still is a directional, which is not what is

claimed. The applicants will now address the specific arguments presented to support this position.

In the case of claims 1, 21, and 34, the signal is explicitly claimed to be "non-directional" - it does not indicate a direction. A signal either contains certain information or it does not. The "non-directional" signal of claim 1 does not contain directional information. There is nothing that is unclear about this. As is noted above the use of a "non-directional signal" has two central consequences: the user input control does not have to be one that is adapted to receive a user input action that designates a direction and further does not have to be adapted to generate a signal that has such information encoded therein. A further consequence of this is that a user of the system does not need to suggest a direction of movement when making an input - which greatly simplifies the challenge faced by a user when taking user input actions. It will be appreciated that such a user input action is much easier to execute than making a directional input particularly in a hand held device that is to be actuated while the user is in motion.

The Office Action correctly points out that the response of the system to the non-directional input signal is to select between available portions. As noted in the Final Rejection, this includes the possibility that different portions will be arranged along a vector or other pattern that is suggestive of a direction. However, even if such a response of the system is made such a result does not change the signal from the user input which is explicitly claimed to be "non-directional." Simply stated, this would not make the signal itself "directional". Accordingly, it is respectfully submitted that one of ordinary skill in the art will be capable of making and using a system with such a "non-directional" signal coming, for example, from a simple and well-known button switch or jog dial switch.

The Final Rejection has also noted that the specification indicates that a jog dial is said to be capable of generating a non-directional signal when rotated. Final Rejection emphasizes that specification notes that the jog dial is rotatable in more than one direction. From this the Final Rejection concludes that this is "suggesting multiple rotation directions are allowed." The Final Rejection then

concludes that "if multiple directions are allowed, the possible reason would be to have multiple cycling directions i.e. forward and backward therefore requiring a directional signal."

The applicants admit openly that claim 1 and other claims herein have not limited the nature of the user input action that causes the user input system to generate a non-directional signal. However, they have limited the nature of the signal that is generated in response to the user input action - specifically the user input action is a non-directional signal. Thus, while a user may move the user input in any of a wide variety of directions there is no directional correlation between the direction that the user moves when engaging any input and the signal that is generated. Whatever motion or movement is made regarding the user input, the signal that is generated does not carry directional information.

Accordingly, the argument that "if multiple directions are allowed, the possible reason would be to have multiple cycling directions" fails on its face as to do this there must be some directional information in the signal to indicate which direction to go in.

The Final Rejection then concludes that "If Applicant is trying to claim the non-directional signal as choosing a specific image region by cycling through the image regions in only one direction, the claims need to be more defined." The Applicants have not claimed "choosing an image region by cycling through the image regions in only one direction" thus, this ground of rejection is incorrect and there is no reason to interpret the "non-directional signal" limitation in a manner that is inconsistent with the plain language thereof.

III. Rejection Of Claims 1, 21 and 34 under 35 U.S.C. 112, Second Paragraph

Claims 1, 21, and 34 stand separately rejected under 35 U.S.C 112, second paragraph. The Final Rejection appears to use the same rationale offered with respect to the rejection under 35 U.S.C. 112, first paragraph, but reaches a slightly different conclusion, specifically, the Final Rejection contends that:

> Claims 1, 21 and 34 recite a "non-directional signal" to select a portion of the original image. However, the Applicant's

> specification discloses controlling the directional signal via an advance button[Fig. 12(210) or a jog dial [Figs. 14, 15(300)]. Although not explicitly clear, from the description of use, the user presses the advance button, where a highlighted box cycles through the portions of the image until the user stops at the portion of the image that he/she desires, and then presses the save button [Fig. 12(212)] to designate a currently presented portion [Pg. 27, line 29- col. 28, lines 21]. The jog dial is operable in at least one direction (R) . The controller interprets the rotational signal as an advance user input [pg. 31, lines 8 -15]. Thus it is unclear how both the advance button of Fig. 12, and the jog dial of Figs. 14 and 15 are considered non-directional if both buttons cycle through portions of the images in a predetermined direction in order for the user to select the desired portion of the image.

This argument does not appear to support the conclusion. It appears to concede that the advance button generates a non-directional advance signal. It also appears to concede that in another embodiment, the jog dial can also create the same non-directional advance signal. It further appears to concede that the controllers of the different embodiments reacts the same way to each non-directional advance signal – the controllers select some portion of an image for magnified viewing, present the selected portion in magnified form and indicate that this portion is of importance to a user. Yet the Final Rejection claims that it is unclear as to how such signals can be non-directional if the response of the system implies that a directional input has been taken.

It is respectfully submitted that it is not clear how these examples of a user input system can be considered to generate a non-directional signal, because, simply stated, the response of the processor to the non-directional signal is irrelevant. What is claimed is that the signal itself is non-directional, this is both clear and unambiguous.

For the reasons stated above, it is respectfully submitted that, such a non-directional signal can be generated by any user input that generates an output signal that does not indicate a direction. As is discussed above, the reaction of the system to this signal does not contradict the distinctly claimed limitation of a "non-directional signal."

2. Claims 1, 13 and 21-43 Are Allowable Under 35 U.S.C. 112, Second Paragraph

Claims 1 – 13 and 21 – 43 stand rejected as being indefinite as lacking an antecedent basis. The basis for this assertion is what appears to be a verbatim restatement of the grounds asserted for rejecting claims 1, 21 and 34 under 35 U.S.C. 112, Second Paragraph followed by the conclusion that such grounds support a rejection on antecedent basis. The Applicants accordingly reassert the arguments presented above in section I.B.

3. Rejection Of Claims 19 and 20 under 35 U.S.C. 112, Second Paragraph

The Applicants agree with the Examiner's assertion with respect to these claims and they have been cancelled by way of amendment provided herewith.

III. The Claims Are Allowable Under 35 U.S.C. 103:

1. Claims 1, 21, and 34 and All Claims That Depend Therefrom Are Allowable In That the Final Rejection is based upon the construction of the term "non-directional" signal to mean "a signal of a predetermined direction" which is not consistent with what is claimed.

The Final Rejection rejects all claims based upon the construction of the phrase "non-directional signal" to mean a "signal being of a predetermined direction rather than a cursor controlled signal where the user can navigate to the desired portion of the original image without having to cycle through all of the portions." For the reasons stated above, it is respectfully submitted that this construction is erroneous – the Office has construed the non-directional signal limitation of claim 1 and other independent claims into a form that is clearly inconsistent with the claim language. Such limitations have been construed based upon a possible reaction of the system to the limitations. The Applicants are unaware of any legal authority that would allow the response of a system to a particular class of signal to be used to justify construing the claims in such a manner.

It will be noted that the Federal Circuit has recently discussed the standards for reviewing a whether a prima facie case of obviousness has been established, in a matter entitled In Re: Leonard R. Kahn, 441 F.3d 977, March 22, 2006. As cited in pertinent part therein,

> *A claimed invention is unpatentable if the differences between it and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the pertinent art. 35 U.S.C. § 103(a) (2000); Graham v. John Deere Co., 383 U.S. 1, 13-14 (1966). The ultimate determination of whether an invention would have been obvious is a legal conclusion based on underlying findings of fact. In re Dembiczak, 175 F.3d 994, 998 (Fed. Cir. 1999). . .*
>
> *In assessing whether subject matter would have been non-obvious under § 103, the Board follows the guidance of the Supreme Court in Graham v. John Deere Co. The Board determines "'the scope and content of the prior art,'" ascertains "'the differences between the prior art and the claims at issue,'" and resolves "'the level of ordinary skill in the pertinent art.'" Dann v. Johnston, 425 U.S. 219, 226 (1976) (quoting Graham, 383 U.S. at 17). Against this background, the Board determines whether the subject matter would have been obvious to a person of ordinary skill in the art at the time of the asserted invention. Graham, 383 U.S. at 17. In making this determination, the Board can assess evidence related to secondary indicia of non-obviousness like "commercial success, long felt but unresolved needs, failure of others, etc." Id., 383 at 17-18; accord Rouffett, 149 F.3d at 1355. We have explained that:*
>
> *[t]o reject claims in an application under section 103, an examiner must show an unrebutted prima facie case of obviousness . . . . On appeal to the Board, an applicant can overcome a rejection by showing insufficient evidence of prima facie obviousness or by rebutting the prima facie case with evidence of secondary indicia of nonobviousness.*
>
> *Rouffett, 149 F.3d at 1355. ...*
>
> *Most inventions arise from a combination of old elements and each element may often be found in the prior art. Id. at 1357. However, mere identification in the prior art of each element is insufficient to defeat the patentability of the combined subject matter as a whole. Id. at 1355, 1357. Rather, to establish a prima facie case of obviousness based on a combination of elements disclosed in the prior art, the Board must articulate the basis on which it concludes that it would have been obvious to make the claimed invention. Id. In practice, this requires that the Board "explain the reasons one of ordinary skill in the art would have been motivated to select the*

references and to combine them to render the claimed invention obvious." Id. at 1357-59. This entails consideration of both the "scope and content of the prior art" and "level of ordinary skill in the pertinent art" aspects of the Graham test.

In Re: Kahn was cited approvingly in the recent Supreme Court decision in KSR Int'l. Company vs. Teleflex Inc., 127 S.Ct. 1727, as follows:

> *Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis [*37] should be made explicit. See In re Kahn, 441 F.3d 977, 988 (CA Fed. 2006) (HN6"Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness"). As our precedents make clear, however, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.*

Accordingly, what is needed to support a Final Rejection on obviousness is an explicit statement of the analysis used in support of the rejection with some rational underpinning to support the legal conclusions drawn therein. Here it is submitted that the construction of these claims in the manner that is contrary to the plain language of the claim does not provide a rational underpinning sufficient to support the rejection. On this ground alone the applicants respectfully submit that the rejection of these claims is erroneous.

2. Claims 1-4, 7-18, 34-36 and 44-46 are allowable over the cited combination in that Moghadam et al. teaches away from designating hot spots after image capture while Anderson only discloses magnifying images after capture.

Moghadam et al. discloses a camera in which "hot spots" areas of an image can be designated. However, Moghadam explicitly teaches against doing

this in a post capture mode. This is made clear in the following sections of Moghadam et al.

> *A camera includes an image receiver for capturing an image of an object, an optical section for directing image light from the object to the image receiver, and* ***a viewfinder for viewing the object prior to capture together with a tile pattern for specifying active "hot spot" areas in the viewed image****. The tile pattern in the viewfinder is composed of a plurality of individual tile areas that are visible through the viewfinder together with the image of the object. The camera further includes means for designating one or more individual tile areas as active areas of the image, and means for recording a location of the active areas in a memory location accessible to apparatus external to the camera. The camera is part of a system in which the apparatus external to the camera is a computer. A program in the computer is responsive to the recorded locations for enabling one or more specific actions to be assigned to the active areas of the recorded image when the image is accessed by the computer. (Moghadam et al. Abstract)...*
>
> ***The advantage of the invention lies in the provision for designating areas during the capture process. Compared to the prior art, labor is reduced by having the designation procedure virtually coincident with capture. The photographer can frame the image with the active areas immediately in mind, which reduces the time normally involved wherein it is done later in the process. By identifying and assigning active areas at the origin of the imaging process, the assignment process is effectively standardized****..." (Moghadam et al. Col. 2, lines 14 – 21)...*
>
> *The present invention is directed to overcoming one or more of the problems set forth above. Briefly summarized, according to one aspect of the present invention, a camera includes an image receiver for capturing an image of an object, an optical section for directing image light from the object to the image receiver,* ***and a viewfinder for viewing the object prior to capture together with a pattern used for specifying active "hot spot" areas in the viewed image.*** *The pattern in the viewfinder is composed of a plurality of individual areas that are visible through the viewfinder together with the image of the object. The camera further includes means for designating one or more individual areas as active areas of the image, and means for recording a location of the active areas in a memory location that is accessible to apparatus external to the camera. (Moghadam et al. Summary of the Invention.)*

Anderson, in contrast shows a system wherein a user uses a directional control to select different ones of an array of thumbnail images for magnification. Clearly, this is a post capture system as one cannot select an image for magnification until the image itself has been captured. Nothing in the Final Rejection suggests any motivation for combining the pre-capture system of Moghadam et al. with a postcapture system of Anderson that overcomes the express teaching against such a combination as made in Moghadam et al.

Specifically, the Final Rejection further contends that Anderson discloses:

> *Anderson teaches a digital camera that includes a viewfinder for displaying a plurality of the image cells.*
>
> *The digital camera also includes [a] navigation control button for positioning a high light area around one of the plurality of image cells [abstract]. As shown in FIG. 4, the user may navigate through a series of displayed cells (420) and select a cell, i.e. cell for 20 that is encircled with a high light area (43) [col. 5, lines 5-10]. The user can use the "view" soft key function (410) where the highlighted cell becomes a full-sized image that is displayed on the viewfinder (402) said it magnification input) [col. 5, lines 33-37].*
>
> *Therefore an obvious to one of ordinary skill in the art to modify the invention of Moghadam et al. to include the "view" magnification of Anderson in order for the user of Moghadam et al. to see in greater detail their selection (i.e. highlighted tile) since the extra display of Moghadam et al. would be too small for the user to see the details of the even smaller selected tile.*

This motivation is simply not consistent with the stated advantages of precapture hot spot identification noted in Moghadam et al., namely the advantage of framing the entire images with the hotspot designations in mind. This cannot be done if, at the moment of hot spot designation, the camera magnifies the image to include only the hot spot.

Thus, these two systems are not properly combined for two reasons: .

1. Moghadam et al. discloses a system that teaches against post capture designation of hot spots, while Anderson clearly shows a method for selecting between previously captured images.

2. Moghadam et al. discloses a system that is configured to allow a user to frame an entire image relative to selected hot spots, while the combination asserted in the Final Rejection would cause the camera to magnify what is shown in the viewfinder to include only the hot spot, thus defeating the purpose of framing the image relative to the hot spots as described in Moghadam et al.

3. Claims 1-4, 7 – 13, and 34 – 43 are further allowable over the cited combination in that the Office Action Fails To Disclose A Combination That Allows A Single Signal Type To Select a portion of an image

The Final Rejection makes the following contentions in the

> *Moghadam et al. teaches the limitations of claims 1-4, 7-18, 34-36 and 44-46, with the exception of teaching the designated portion having a magnification. However, Anderson teaches selecting an image from a grid of images on a digital camera and maximizing the selected image on the display.*
>
> *In regards to claim 1, Moghadam teaches a camera (digital or photographic) that includes an image receiver for capturing an image of an object. As shown in FIG. 4, the digital camera is comprised of an external LCD (42) (said display). Furthermore, the digital camera can have an electronic viewfinder (76) as shown in FIG. 6. The internal LCD panel (18) generates a grid-like pattern (30) (i.e. tile pattern), which defines individual tile areas (32), one or more of which may be designated as an active area (said determined a set of portions) [col. 3, lines 9-31]. As shown in FIG. 2(b), the tile pattern (30) partitions the image of source (28) where at least one portion is not-central, i.e. tile (34) (said non-central). Each tile area (32) is capable of being individually highlighted for consideration, such as the highlighted area (34) [col. 3, lines 24-27]. The digital camera has a thumbwheel switch (38) [FIGS. 1, 3] which functions both as a tile pattern selection switch (38a) for selecting a particular tile pattern (30) and as a tile area designation switch (38b) for cycling through the tile areas (32) and highlighting one tile area after another (said non-directional signal) [col. 3, lines 31-44].*

The Applicants respectfully traverse this portion of the rejection on grounds that lines 31-44, of Moghadam et al., are part of a larger portion of Moghadam et al. which states as follows:

> *As shown together in FIGS. 1 and 3, a top control panel 35 of the camera 10 includes a multi-functional mode selector switch 36 for selecting among several camera operation modes, including an active*

image area designation mode. The mode switch 36 is also used to select the functionality of a thumbwheel switch 38. The thumbwheel switch 38 accordingly functions both as a tile pattern selection switch (38a) for selecting a particular tile pattern 30 and as a tile area designation switch (38b) for cycling through the tile areas 32 and highlighting one tile area after the other. A "hot spot" selector switch 40 is used to designate a particular highlighted tile area 34 as an active area ("hot spot").

The action of enabling the "hot spot" switch 40 causes some further change in the highlighted tile area 34, such as the overall graying of the area such that a darkened underlying image is seen through a grey tint. An external LCD panel 42 displays the mode selected by the mode selector switch 36. The camera 10 also includes a shutter release 44 for initiating image capture and an output memory 48 for storing the captured image. The memory 48 is shown in FIG. 1 as a removable memory and accordingly functions as a memory location that is accessible to apparatus, e.g., a computer, external to the camera 10. Subsequent to designation of one or more individual tile areas 32 as active areas of the image, the locations of these active areas are also stored in the memory 48. Such locations may be positional coordinates, X-Y addresses, or the like.

From this, it is clear that the section of Moghadam et al. relied upon by the Office Action requires a user to make at least two different input actions using at least two different signals in order to select an active area. These plurality of input actions include at least two of :

1. Choose a tile pattern (using wheel 38 in a first mode selected according to a signal from a switch 36).

2. Cycling to a selected one or more of the tiles in the tile pattern (also using wheel 38 in a second mode selected according to a signal from a switch 36); and;

3. Designating each selected area as a hotspot by pressing switch 40.

As is later discussed in Moghadam et al. there are embodiments wherein only a manual active area selection (not requiring multiple tile patterns in the memory 56) is provided and other embodiments providing a choice of tile patterns as stored in the memory 56. In the first alternative, the step of selecting a tile pattern can be avoided, in the second, the steps of individually selecting portions within a tile pattern can be avoided. However, at least two user input actions and, accordingly, two control signals are required to achieve this effect - one control

signal designating a portion and another selecting it as a hot spot which is done by pressing the "hot spot" selector 40.

Thus, Moghadam et al. alone does not suggest a system that uses only a non-directional signal. Instead Moghadam et al. discloses a two input system, with one input system used to move among hot spots and another different signal used to select a hot spot. This is inconsistent with what is claimed and has the effect of being more difficult for a user to perform as this requires users to make selections between inputs, which can be difficult when, for example, the user is on the move and also requires that two input.

On this ground, claims 1, 21 and 34 are further allowable over the cited combination in that only a single non-directional user input is required to occasion the presentation of a magnified image of a portion of an original image and to designate that portion as an area of importance while the combination clearly requires the use of two separate signals.

4. Claims 1-4, 7-18, 34-36 and 44-46 are allowable over the cited combination in that the Office Action Fails To Disclose A Combination That Enables Selection of a portion of an image for magnified viewing and that also assigns an area of importance to that portion.

According to the final rejection, the hotspot:

> *The "hot spot" (40) causes further change in the highlighted tile (34), such as the overall graying of the area such that a darkened underlying image is seen through a grey tint (said display up portion of evaluation image) [col. 3, lines 46-48]. The choosing of a specific tile (e.g. tile '34') indicates an importance to the user, otherwise the user would not have chosen the tile.*

Thus, Moghadam et al. provides a camera that allows a user to designate hot spots for use by a computer. The hot spots define areas in an image that a computer program will later use "for enabling one or more specific actions to be assigned to the active areas of the recorded image when the image is accessed by the computer." (Moghadam et al. Abstract) The word importance is not found in Moghadam et al. thus there is no explicit disclosure of an area of importance.

Further, since the range of "specific actions" of Moghadam et al. are not limited in any way to actions that are to be performed at an area of importance. It is therefore equally likely that the hot spot may not be the area of importance, but rather, associated with an area of the image wherein specific actions, such as presenting text, may be accomplished without obstructing the areas of importance in the image. They may also designate areas for cropping out of the image so that only areas of importance remain. Thus, it does not follow that a designation of an area as a hot spot means that the area is an area of importance in an image or is meant as is claimed.

The Final Rejection admits that Moghadam et al. does not disclose the use of the word importance. The Final Rejection simply dismisses this by asserting that Moghadam et al. discloses a tile selection process that distinguishes one tile from another and asserting that the Applicants have not explained in their remarks how and area of importance differs from a selection of a tile

As is noted in the specification at page 1 of the specification, an area of importance designation can be very useful in assisting to improve image quality after capture as a variety of processes can be usefully applied to portions of images that a user considers to be important. In this respect, the term area of importance has a well understood meaning to those of skill in the art of image processing and analysis. This meaning is not consistent with the meaning and usage of hot spots, which are also well known in the art, and are described in detail in Moghadam et al. as will be discussed in greater detail below.

Further, as is noted in the specification at page 2, such processes require that a user make a manual designation after capture of the area of importance. This is time consuming and therefore this is only done for a fraction of the images in collection. What is desired therefore is a simpler mechanism for an association of an area of importance to be made more convenient, thus more frequent, and to be made more closely to the time of capture. This is simply not provided by Anderson, which simply provides for a selection mechanism between different images that are presented as a collection or by Moghadam et al. which states as follows:

In multimedia applications, it is known to associate actions or additional information with active areas, generally known as "hot spots ", in digital images. These "hot spots " are generally embedded in image areas or graphics areas of the digital image. They are activated, for example, by positioning a cursor over the "hot spot" and holding down a mouse button. This causes the application to branch to a predetermined presentation sequence. Examples include assignment of an active box in the Create-It.TM. software provided by Eastman Kodak Company, or the assignment of a key or button in a HyperShow.TM. application run with Harvard Graphics.TM. software provided by Software Publishing Corporation. In each of these applications the task of assigning active areas in the image is accomplished after the image is captured, scanned, and digitized by manually drawing a box around the active area and then assigning the required action to the box.

In today's systems, the "hot spots " can only be defined after the image is digitized, entered into the computer, and opened in the specific application. There is no standard method for segmenting images for identifying active areas (i.e., for identifying "hot spots"). Identifying active areas and assigning actions is unique for each application and is labor intensive. Moreover, because there is no standard method for identifying and assigning active areas, the "hot spot" locations and their associated actions are lost when images with "hot spots " are cut and pasted or otherwise transferred between different multimedia applications.

It will be appreciated that there is no teaching or suggestion that these hot spots designate areas that are of any particular importance to the user. Instead they are merely convenient areas for positioning a trigger mechanism within an image. They may or may not be of importance to a user and, more importantly, these areas would be unreliable as indicators of areas of an image that are intended to be processed using the various automatic processing techniques that are known in the art for processing an image based upon a designation of an area of importance within the image.

5. Claims 14 and 44 are Allowable Under 35 U.S.C. 103 Over Moghadam et al. and Anderson as the motivation cited for the combination is contrary to the advantage of Moghadam et al.

Claim 14 and 44 stand rejected on the same grounds – a combination of Moghadam et al. with Anderson. Specifically, it is asserted that it would have been obvious for one of ordinary skill in the art to modify the invention of Moghadam "to include the "View" magnification of Anderson in order for the user of Moghadam to see in greater detail their selection (i.e. highlighted tile) since the external display of Moghadam would be too small for the user to see the details of the even smaller selected tile (said showing each portion having magnification)." However, this argument is not consistent with the stated advantage of Moghadam et al. which is to allow framing of the image in context with the proposed arrangement of hot spots BEFORE the image is captured. Magnifying a single hot spot would defeat this purpose as the photographer would ONLY be able to view the hot spot and not the entire image being framed. Thus the motivation cited for this combination fails as it is clearly contrary to the stated advantage of Moghadam et al. Accordingly, claims 14 and 44 and all claims that depend therefrom are allowable over the cited combination.

6. Remaining Rejections Under 35 U.S.C. 103

The Final Rejection asserts a number of other three or more way rejections. All ultimately rely upon the above cited combination of Moghadam et al. with Anderson. Accordingly, the Applicants respectfully respond to each of these rejections by reasserting that such combinations cannot stand for the reasons cited above.

Summary

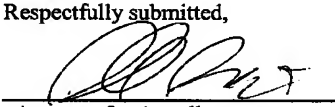
The Final Rejection relies upon a construction of certain claims that is inconsistent with the plain language thereof, relies upon a combination of references that teach apart and relies upon at least one motivation for combination

that is contrary to the stated advantage of one of the references. As such reversal of the Final Rejection is warranted.

Conclusion

For the above reasons, Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the rejection by the Examiner and mandate the allowance of the Claims.

Respectfully submitted,



Attorney for Appellants
Registration No. 40,802

Roland R. Schindler II/jrk
Telephone: 585-588-2736
Facsimile: 585-477-1148
Enclosures
If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at
(585) 477-4656.

Appendix I - Claims on Appeal

1. (Previously presented) A display device comprising:

a source of an original image;

a display;

a user input system adapted to generate a non-directional signal in response to a user input action; and

a controller adapted to determine a set of portions of the original image each portion including less than all of the original image and with the set having at least one portion that is non-central with respect to the original image and to successively designate a different one of a set of portions of the original image in response to each non-directional signal and adapted to cause the display to present a portion evaluation image showing the currently designated portion of the original image and to determine an area of importance in the original image based upon the currently designated portion;

wherein each portion evaluation image shows the currently designated portion having a magnification, that is greater than the magnification that the currently designated portion has when the currently designated portion is presented as a part of the original image.

2. (Previously presented) The display device of claim 1, wherein the controller is further adapted to generate area of importance data defining the portion of the original image determined to be the area of importance based upon the determined area of importance and to associate the area of importance data with the

original image so that a person having access to the original image can also determine which area of the image was determined to be the area of importance.

3. (Original) The display device of claim 2, wherein the controller associates the area of importance data with the original image by storing the area of importance data as metadata in a digital image that comprises the original image.

4. (Original) The display device of claim 2, wherein the controller associates the area of importance data with the original image by storing the area of importance data as metadata on a photosensitive film bearing the original image.

5. (Original) The display device of claim 1, wherein the controller is further adapted to generate a revised image based upon image information from the area of importance and to store the revised image.

6. (Original) The display device of claim 5, wherein the controller is further adapted to resample the revised image so that the revised image has image characteristics that correspond to the image characteristics of the original image.

7. (Previously presented) The display device of claim 1, wherein the non-directional signal comprises a start signal and an end signal generated in response to a user input action; and wherein the controller is adapted to detect the start signal and, in response thereto, sequentially designate a different one of the set of portions of the original image and to cause the display to present an

evaluation image showing each currently designated portion for a period of time, said sequence of designations ending when the end signal is generated, wherein the controller is further adapted to determine an area of importance in the original image based upon the portion that is designated when the end signal is generated.

8. (Original) The display device of claim 1, wherein the non-directional signal comprises a start signal and an end signal, with the start signal being generated in response to a first user input action and an end signal being generated in response to a second user input action; and wherein the controller is adapted to detect at least one start signal and, in response thereto, provisionally designate a different one of the set of portions of the original image and to cause the display to present an evaluation image that shows each provisionally designated portion, wherein the controller is further adapted to detect the end signal and in response thereto, to determine an area of importance based upon the portion that is provisionally designated when the end signal is detected.

9. (Original) The display device of claim 1, the user input system is to generate a first non-directional signal in response to the user input action and the controller is further adapted to designate a first portion of the image in response thereto, wherein the controller is further adapted to receive subsequent non-directional signals and to provisionally designate a different portion of the original image in response to each subsequent non-directional signal, and wherein the controller determines that a portion is to be designated when an input signal is continual for a period of time longer than a predefined time period.

10. (Original) The display device of claim 1, wherein the user input system generates a save input in response to a save user input action and, in response thereto, the controller uses the currently designated portion to determine an area of importance.

11. (Original) The display device of claim 1, wherein the user input system generates a reset signal in response to a reset user input action and the controller does not designate an area of importance for an image when a reset action is detected.

12. (Original) The display device of claim 1, wherein the set of predetermined portions of the original image include less than 10 portions.

13. (Original) The display device of claim 1, wherein the user input system is adapted to receive a magnification input and to generate a magnification signal in response thereto and wherein the controller is adapted to use more than one set of portions of image information from the original image with each set having at least one portion therein that is sized differently from at least one portion in another set of the more than one set of portions, and with the controller selecting one of the more than one set based upon the magnification input.

14. (Previously Presented) A display device comprising:

a source of an original image;

a display;

a user input system adapted to generate an advance signal that indicates only that a user input action has been taken and a save signal; and

a controller adapted to detect the advance signal and, in response thereto, to cause the display to present a sequence of portion evaluation images each representing the image content of one of a set of different portions of the original image and showing each portion having a magnification that is greater than the magnification that each portion has when the portion is presented on the display part of the original image with the predetermined set of portions including at least one portion that is non-central with respect to the original image;

wherein the controller determines an area of importance in the original image based upon the portion of the original image presented when the controller detects the save signal.

15. (Original) The display device of claim 14, wherein the source of an original image comprises an image capture system.

16. (Original) The display device of claim 15, wherein the controller is adapted to cause the display to present an evaluation image that has an appearance that corresponds to the appearance of the original image and to receive signals from the user input system during presentation of the evaluation image.

17. (Original) The display device of claim 16, wherein the controller forms each image in the sequence of images that sequentially designate a

set of portions of the original image by forming indicia in the designated portions of the evaluation image that indicate the portion that is currently being designated.

18. (Original) The display device of claim 15, wherein the controller forms each portion evaluation image so that it incorporates only image information from the currently selected portion.

19. (Cancel) The display device of claim 15, wherein the end signal comprises the absence of the start signal.

20. (Cancel) The display device of claim 15, wherein the user input system is adapted to generate the start signal in response to one user input action and the end signal in response to a different user input action.

21. (Previously Presented) A display device comprising:

a source of an original image;

a display;

a user input system adapted to generate a non-directional advance signal in response to a user input action; and

a controller adapted to define a number of portion evaluation images each comprising image information from a portion of the original image with each portion being located relative to a predefined anchor point within the original image, with the controller further being adapted to cause a different portion evaluation image to be presented on the display in response to each

advance signal and with the controller additionally being adapted to determine from the non-directional advance signal, a user designation of a portion of the original image and to use the designation to determine an area of the importance in the original image;

wherein at least one anchor point is located so that at least one portion is non-central with respect to the original image and wherein each portion evaluation image shows the currently designated portion having a magnification, that is greater than the magnification that the currently designated portion has when the currently designated portion is presented as a part of the original image.

22. (Original) The display device of claim 21, wherein the user input system is adapted to receive a shape designation input and generate a shape signal and wherein the controller determines the shape of the portion within the original image based upon the shape signal.

23. (Original) The display device of claim 22, wherein the controller is further adapted to generate area of importance data based upon the designated portion and to associate the area of importance data with the original image.

24. (Original) The display device of claim 23, wherein the controller associates the area of importance data with the original image by storing the area of importance data as metadata in a digital image that comprises the original image.

25. (Original) The display device of claim 23, wherein the controller associates the area of importance data with the original image by storing the area of importance data as metadata on a photosensitive film bearing the original image.

26. (Original) The display device of claim 22, wherein the controller is further adapted to generate a revised image based upon image information from area of importance.

27. (Original) The display device of claim 26, wherein the controller is further adapted to resample the revised image so that the revised image has image characteristics that correspond to the image characteristics of the original image.

28. (Original) The display device of claim 22, wherein the user input system receives a magnification input and generates a magnification signal in response thereto and wherein the controller determines the size of a portion within the original image based upon the magnification signal.

29. (Original) The display device of claim 22, wherein each portion is defined within the original image as comprising image information that is contained within a predetermined template located within the original image at a position located by one of said anchor points.

30. (Original) The display device of claim 29, wherein each portion is defined within the original image as comprising image information that is contained within one of a set of differently sized templates located within the original image at a position defined by one of said anchor points, wherein one of the differently sized templates is selected by the controller based upon a magnification signal received from the user input system.

31. (Original) The display device of claim 21, further comprising the step of forming a revised image containing image information from the area of importance.

32. (Original) The display device of claim 31, further comprising the step of storing the revised image in place of the original image.

33. (Original) The display device of claim 30, further comprising a zoom input generating a zoom signal wherein the relative proportion of the portion of the original image used to form an evaluation image is determined based upon the zoom signal.

34. (Original) A method for operating a display device comprising the steps of:

obtaining an original image;

presenting an evaluation image having an appearance that corresponds to the original image;

defining a set of different portions in the original image, with each portion comprising less than all of the original image and at least one of the portions being non-central with the original image;

detecting a non-directional user input action during presentation of the evaluation image;

designating one of the sets of portions in response to each detected non-directional user input action;

presenting a portion evaluation image that corresponds to the designated portion with the portion evaluation image showing the currently designated portion having a magnification that is greater than the magnification that the designated portion has when the currently designated portion is presented as a part of the original image; and

determining an area of importance based upon the designated portion.

35. (Original) The method of claim 34, further comprising the step of detecting a reset action during presentation of the portion evaluation image and in response thereto, designating a different one of the portions and presenting a portion evaluation image that corresponds to the different one of the portions.

36. (Original) The method of claim 34, wherein the step of defining a set of different portions in the original image comprises defining said portions based upon a predetermined pattern

37. (Original) The method of claim 34, wherein the step of defining a set of different portions in the original image comprises the steps of analyzing the image content of the original image and defining portions based upon the image analysis.

38. (Original) The method of claim 37, wherein the step of analyzing the image content of the original image comprises determining which portions of the original image are in focus, and defining the portions of the set of portions based upon the focus analysis.

39. (Original) The method of claim 34, wherein the step of defining a set of different portions in the original image comprises the steps of receiving a user input action that designates an anchor point in the original image from a predefined set of anchor points and receiving a user input action that designates a portion shape to be located within the original image relative to the anchor point, wherein the designated portion comprises the portion of the original image contained within the portion shape as located relative to the anchor point.

40. (Previously presented) The method of claim 34, wherein the step of defining a set of different portions in the original image comprises the

steps of analyzing information used in a capture step in which the original image is captured to define the set of portions.

41. (Original) The method of claim 34, wherein the step of defining a set of different portions in the original image comprises analyzing the original image to identify potential subjects in the original image and defining portions that correspond to the identified potential subjects.

42. (Original) The method of claim 34, wherein the step of defining a set different portions in the original image comprises analyzing the original image to identify illumination patterns within the original image and defining a portion based upon one or more detected patterns.

43. (Original) The method of claim 34, wherein the step of defining a set of different portions of the original image comprises analyzing the original image to determine potential subject areas and defining a portion for each determined potential subject area.

44. (Previously Presented) A method for operating a display device, the method comprising the steps of:

obtaining an original image;

displaying an evaluation image of the original image;

detecting an advance user input action that does not include a directional input relative to the displayed evaluation image;

selecting a sequence of different portions from a set of different portions of the original image in response to the advance user input action;

presenting, for each selected portion, a portion evaluation image that indicates the image information in the original image that is contained within the currently designated portion; and

detecting a save user input action and determining an area of importance based upon the selected portion displayed when the save input user action is detected,

wherein at least one of the predetermined set of portions of the original image is non-central with respect to the original image and wherein each portion evaluation image shows the currently designated portion having a magnification, that is greater than the magnification that the currently designated portion has when the currently designated portion is presented as a part of the original image.

45. (Previously presented) The method of claim 44, wherein the step of selecting at least one portion comprises receiving at least one advance signal and designating a different one of the set of portions in response to each advance signal.

46. (Original) The method of claim 44, wherein the steps of selecting at least one portion of a set of different portions of the original image based upon the user input action; and presenting, for each selected portion, a portion evaluation image that indicates the image information in the original

image that is contained within the currently designated portion comprise presenting a sequence of portion evaluation images including each of the portions in the set of different portions and detecting a save user input action during presentation of one of the portion evaluation images.

Appendix II - Evidence

NONE.

Appendix III – Related Proceedings

NONE.

Response under 37 C.F.R. 1.116
- Expedited Examining Procedure -
Examining Group 2628

MAIL STOP AF
83094RRS

Customer No. 01333

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

James W. Cannon, et al

DISPLAY DEVICE AND METHOD FOR DETERMINING AN AREA OF IMPORTANCE IN AN ORIGINAL IMAGE

Serial No. 10/810,283

Filed 26 March 2004

Group Art Unit: 2628

Examiner: Michelle K. Lay

Commissioner for Patents
P.O. Box 1450
Alexandria, VA. 22313-1450

Sir:

RESPONSE UNDER 37 CFR 1.116

Please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 12 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing of claims in the application.

1. (Previously presented) A display device comprising:

a source of an original image;

a display;

a user input system adapted to generate a non-directional signal in response to a user input action; and

a controller adapted to determine a set of portions of the original image each portion including less than all of the original image and with the set having at least one portion that is non-central with respect to the original image and to successively designate a different one of a set of portions of the original image in response to each non-directional signal and adapted to cause the display to present a portion evaluation image showing the currently designated portion of the original image and to determine an area of importance in the original image based upon the currently designated portion;

wherein each portion evaluation image shows the currently designated portion having a magnification, that is greater than the magnification that the currently designated portion has when the currently designated portion is presented as a part of the original image.

2. (Previously presented) The display device of claim 1, wherein the controller is further adapted to generate area of importance data defining the portion of the original image determined to be the area of importance based upon the determined area of importance and to associate the area of importance data with the original image so that a person having access to the original image can also determine which area of the image was determined to be the area of importance.

3. (Original) The display device of claim 2, wherein the controller associates the area of importance data with the original image by storing the area of importance data as metadata in a digital image that comprises the original image.

4. (Original) The display device of claim 2, wherein the controller associates the area of importance data with the original image by storing the area of importance data as metadata on a photosensitive film bearing the original image.

5. (Original) The display device of claim 1, wherein the controller is further adapted to generate a revised image based upon image information from the area of importance and to store the revised image.

6. (Original) The display device of claim 5, wherein the controller is further adapted to resample the revised image so that the revised image has image characteristics that correspond to the image characteristics of the original image.

7. (Previously presented) The display device of claim 1, wherein the non-directional signal comprises a start signal and an end signal generated in response to a user input action; and wherein the controller is adapted to detect the start signal and, in response thereto, sequentially designate a different one of the set of portions of the original image and to cause the display to present an evaluation image showing each currently designated portion for a period of time, said sequence of designations ending when the end signal is generated, wherein the controller is further adapted to determine an area of importance in the original image based upon the portion that is designated when the end signal is generated.

8. (Original) The display device of claim 1, wherein the non-directional signal comprises a start signal and an end signal, with the start signal being generated in response to a first user input action and an end signal being generated in response to a second user input action; and wherein the controller is adapted to detect at least one start signal and, in response thereto, provisionally designate a different one of the set of portions of the original image and to cause the display to present an evaluation image that shows each provisionally designated portion, wherein the controller is further adapted to detect the end signal and in response thereto, to determine an area of importance based upon the portion that is provisionally designated when the end signal is detected.

9. (Original) The display device of claim 1, the user input system is to generate a first non-directional signal in response to the user input action and

the controller is further adapted to designate a first portion of the image in response thereto, wherein the controller is further adapted to receive subsequent non-directional signals and to provisionally designate a different portion of the original image in response to each subsequent non-directional signal, and wherein the controller determines that a portion is to be designated when an input signal is continual for a period of time longer than a predefined time period.

10. (Original) The display device of claim 1, wherein the user input system generates a save input in response to a save user input action and, in response thereto, the controller uses the currently designated portion to determine an area of importance.

11. (Original) The display device of claim 1, wherein the user input system generates a reset signal in response to a reset user input action and the controller does not designate an area of importance for an image when a reset action is detected.

12. (Original) The display device of claim 1, wherein the set of predetermined portions of the original image include less than 10 portions.

13. (Original) The display device of claim 1, wherein the user input system is adapted to receive a magnification input and to generate a magnification signal in response thereto and wherein the controller is adapted to use more than one set of portions of image information from the original image with each set having at least one portion therein that is sized differently from at least one portion in another set of the more than one set of portions, and with the controller selecting one of the more than one set based upon the magnification input.

14. (Previously presented) A display device comprising:

a source of an original image;

a display;

a user input system adapted to generate an advance signal that indicates only that a user input action has been taken and a save signal; and

a controller adapted to detect the advance signal and, in response thereto, to cause the display to present a sequence of portion evaluation images each representing the image content of one of a set of different portions of the original image and showing each portion having a magnification that is greater than the magnification that each portion has when the portion is presented on the display part of the original image with the predetermined set of portions including at least one portion that is non-central with respect to the original image;

wherein the controller determines an area of importance in the original image based upon the portion of the original image presented when the controller detects the save signal.

15. (Original) The display device of claim 14, wherein the source of an original image comprises an image capture system.

16. (Original) The display device of claim 15, wherein the controller is adapted to cause the display to present an evaluation image that has an appearance that corresponds to the appearance of the original image and to receive signals from the user input system during presentation of the evaluation image.

17. (Original) The display device of claim 16, wherein the controller forms each image in the sequence of images that sequentially designate a set of portions of the original image by forming indicia in the designated portions of the evaluation image that indicate the portion that is currently being designated.

18. (Original) The display device of claim 15, wherein the controller forms each portion evaluation image so that it incorporates only image information from the currently selected portion.

19. (Cancel)

20. (Cancel)

21. (Previously presented) A display device comprising:

a source of an original image;

a display;

a user input system adapted to generate a non-directional advance signal in response to a user input action; and

a controller adapted to define a number of portion evaluation images each comprising image information from a portion of the original image with each portion being located relative to a predefined anchor point within the original image, with the controller further being adapted to cause a different portion evaluation image to be presented on the display in response to each advance signal and with the controller additionally being adapted to determine from the non-directional advance signal, a user designation of a portion of the original image and to use the designation to determine an area of the importance in the original image;

wherein at least one anchor point is located so that at least one portion is non-central with respect to the original image and wherein each portion evaluation image shows the currently designated portion having a magnification, that is greater than the magnification that the currently designated portion has when the currently designated portion is presented as a part of the original image.

22. (Original) The display device of claim 21, wherein the user input system is adapted to receive a shape designation input and generate a shape signal and wherein the controller determines the shape of the portion within the original image based upon the shape signal.

23. (Original) The display device of claim 22, wherein the controller is further adapted to generate area of importance data based upon the designated portion and to associate the area of importance data with the original image.

24. (Original) The display device of claim 23, wherein the controller associates the area of importance data with the original image by storing the area of importance data as metadata in a digital image that comprises the original image.

25. (Original) The display device of claim 23, wherein the controller associates the area of importance data with the original image by

storing the area of importance data as metadata on a photosensitive film bearing the original image.

26. (Original) The display device of claim 22, wherein the controller is further adapted to generate a revised image based upon image information from area of importance.

27. (Original) The display device of claim 26, wherein the controller is further adapted to resample the revised image so that the revised image has image characteristics that correspond to the image characteristics of the original image.

28. (Original) The display device of claim 22, wherein the user input system receives a magnification input and generates a magnification signal in response thereto and wherein the controller determines the size of a portion within the original image based upon the magnification signal.

29. (Original) The display device of claim 22, wherein each portion is defined within the original image as comprising image information that is contained within a predetermined template located within the original image at a position located by one of said anchor points.

30. (Original) The display device of claim 29, wherein each portion is defined within the original image as comprising image information that is contained within one of a set of differently sized templates located within the original image at a position defined by one of said anchor points, wherein one of the differently sized templates is selected by the controller based upon a magnification signal received from the user input system.

31. (Original) The display device of claim 21, further comprising the step of forming a revised image containing image information from the area of importance.

32. (Original) The display device of claim 31, further comprising the step of storing the revised image in place of the original image.

33. (Original) The display device of claim 30, further comprising a zoom input generating a zoom signal wherein the relative proportion of the portion of the original image used to form an evaluation image is determined based upon the zoom signal.

34. (Original) A method for operating a display device comprising the steps of:

obtaining an original image;

presenting an evaluation image having an appearance that corresponds to the original image;

defining a set of different portions in the original image, with each portion comprising less than all of the original image and at least one of the portions being non-central with the original image;

detecting a non-directional user input action during presentation of the evaluation image;

designating one of the sets of portions in response to each detected non-directional user input action;

presenting a portion evaluation image that corresponds to the designated portion with the portion evaluation image showing the currently designated portion having a magnification that is greater than the magnification that the designated portion has when the currently designated portion is presented as a part of the original image; and

determining an area of importance based upon the designated portion.

35. (Original) The method of claim 34, further comprising the step of detecting a reset action during presentation of the portion evaluation image and in response thereto, designating a different one of the portions and presenting a portion evaluation image that corresponds to the different one of the portions.

36. (Original) The method of claim 34, wherein the step of defining a set of different portions in the original image comprises defining said portions based upon a predetermined pattern

37. (Original) The method of claim 34, wherein the step of defining a set of different portions in the original image comprises the steps of analyzing the image content of the original image and defining portions based upon the image analysis.

38. (Original) The method of claim 37, wherein the step of analyzing the image content of the original image comprises determining which portions of the original image are in focus, and defining the portions of the set of portions based upon the focus analysis.

39. (Original) The method of claim 34, wherein the step of defining a set of different portions in the original image comprises the steps of receiving a user input action that designates an anchor point in the original image from a predefined set of anchor points and receiving a user input action that designates a portion shape to be located within the original image relative to the anchor point, wherein the designated portion comprises the portion of the original image contained within the portion shape as located relative to the anchor point.

40. (Previously presented) The method of claim 34, wherein the step of defining a set of different portions in the original image comprises the steps of analyzing information used in a capture step in which the original image is captured to define the set of portions.

41. (Original) The method of claim 34, wherein the step of defining a set of different portions in the original image comprises analyzing the original image to identify potential subjects in the original image and defining portions that correspond to the identified potential subjects.

42. (Original) The method of claim 34, wherein the step of defining a set different portions in the original image comprises analyzing the original image to identify illumination patterns within the original image and defining a portion based upon one or more detected patterns.

43. (Original) The method of claim 34, wherein the step of defining a set of different portions of the original image comprises analyzing the original image to determine potential subject areas and defining a portion for each determined potential subject area.

44. (Previously presented) A method for operating a display device, the method comprising the steps of:

obtaining an original image;

displaying an evaluation image of the original image;

detecting an advance user input action that does not include a directional input relative to the displayed evaluation image;

selecting a sequence of different portions from a set of different portions of the original image in response to the advance user input action;

presenting, for each selected portion, a portion evaluation image that indicates the image information in the original image that is contained within the currently designated portion; and

detecting a save user input action and determining an area of importance based upon the selected portion displayed when the save input user action is detected,

wherein at least one of the predetermined set of portions of the original image is non-central with respect to the original image and wherein each portion evaluation image shows the currently designated portion having a magnification, that is greater than the magnification that the currently designated portion has when the currently designated portion is presented as a part of the original image.

45. (Previously presented) The method of claim 44, wherein the step of selecting at least one portion comprises receiving at least one advance signal and designating a different one of the set of portions in response to each advance signal.

46. (Original) The method of claim 44, wherein the steps of selecting at least one portion of a set of different portions of the original image based upon the user input action; and presenting, for each selected portion, a

portion evaluation image that indicates the image information in the original image that is contained within the currently designated portion comprise presenting a sequence of portion evaluation images including each of the portions in the set of different portions and detecting a save user input action during presentation of one of the portion evaluation images.

REMARKS

Claims 1-46 are pending in the application. Claims 19 and 20 have been cancelled for the purpose of limiting issues on Appeal.

Applicant respectfully requests reconsideration in view of the foregoing amendments.

It is respectfully submitted, therefore, that in view of the above amendments and remarks, that this application is now in condition for allowance, prompt notice of which is earnestly solicited.

The Commissioner is hereby authorized to charge any fees in connection with this communication to Eastman Kodak Company Deposit Account No. 05-0225.

Respectfully submitted,

Attorney for Applicant(s)
Registration No. 40,802

Roland R. Schindler II/jrk
Rochester, NY 14650
Telephone: 585-588-2736
Facsimile: 585-477-1148